Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of radio transmission of real-time IP packets using header compression, comprising:

header-compressing a number of ~~the~~ RTP packets, to obtain header-compressed RTP packets having a plurality of different header compression lengths, wherein a single compressed header corresponds to a single RTP payload in each of the header-compressed RTP packets;

pre-configuring header compression lengths and length types required by the system; and

PDU-size adapting the plurality of different header compression lengths of the header-compressed RTP packets, so as to comply with said lengths and length types required by the system.

2. (Currently Amended) A method according to Claim 1, wherein the ~~step of~~ header-compressing the number of ~~an~~ RTP packets ~~further comprising~~comprises:

marking a compressed header and an RTP payload, and separating the compressed header from the RTP packet based on said marking before PDU-size adapting the header-compressed RTP packet, and then PDU-size adapting the separated compressed header.

3. (Original) A method according to Claim 2, further comprising, after separating the compressed header from the RTP payload based on said marking, further dividing the RTP payload into blocks of different error sensitivities based on the RTP payload format information, then PDU-size adapting the separated compressed header.

4. (Original) A method according to Claim 3, further comprising, after dividing the RTP payload into blocks of different error sensitivities, combining the compressed header with at least one data blocks of the RTP payload, then PDU-size adapting the data blocks containing said compressed header.

5. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 2, further comprising applying a UEP mechanism to the separated compressed header and the RTP payload, or the separated compressed header and the data blocks of the RTP payload, or the data blocks containing the compressed header and the remaining RTP payload data blocks.

6. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 2, further comprising mapping the separated compressed header and the RTP payload, or the separated compressed header and the data blocks of the RTP payload, or the data blocks containing the compressed header and the remaining RTP payload data blocks to different RLC entities for transmission.

7. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 2, further comprising transmitting the compressed header and the RTP payload, or the separated compressed header and the data blocks of the RTP payload, or the data blocks containing the compressed header and the remaining RTP payload data blocks on the same transmission time interval, and configuring corresponding transport channels thereof as ~~"~~coordinated dedicated transport channels~~"~~.

8. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 2, further comprising receiving and extracting, at a receiving end, the compressed header and the RTP payload, or the separated compressed header and the data blocks of the RTP payload, or the data blocks containing the compressed header and the remaining RTP payload data blocks, from RLC entity SDU corresponding to the compressed header and the RTP payload, or the separated compressed header and the data blocks of the RTP payload, or the data

blocks containing the compressed header and the remaining RTP payload data blocks, respectively.

9. (Original) A method according to Claim 8, further comprising combining the extracted compressed header and the RTP payload, or the separated compressed header and the data blocks of the RTP payload, or the data blocks containing the compressed header and the remaining RTP payload data blocks, into a complete RTP packet.

10. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 1, wherein the lengths and length types required by the system depend on a tradeoff between transmission efficiency and TFCI decoding reliability.

11. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 6, wherein the RLC entity is a TM mode RLC entity.

12. (Currently Amended) A system of radio transmission of real-time IP packet using header compression, comprising:

a header compression unit to header-compress ~~for header-compressing~~ RTP packets, to obtain header-compressed RTP packets having a plurality of different header compression lengths, wherein a single compressed header corresponds to a single RTP payload in each of the header-compressed RTP packets;

a configuring unit to pre-configure ~~for pre-configuring~~ header compression lengths and length types required by the system; and

a radio link adaptation unit to ~~for~~ PDU-size adapt ~~adapting~~ the plurality of different header compression lengths of the header-compressed RTP packets, so as to comply with said lengths and length types required by the system.

13. (Currently Amended) A method of transmitting real-time IP packets using header compression, comprising:

header-compressing RTP packets and marking a compressed header and an RTP payload, wherein a single compressed header corresponds to a single RTP payload in each of the header-compressed RTP packets;

separating the compressed header from the RTP payload based on said marking, to respectively form PDCP layer PDUs before mapping them to different RLC entities; and

transmitting the separated compressed header and RTP payload.

14. (Original) A method according to Claim 13, further comprising after separating the compressed header from the RTP payload, PDU-size adapting the compressed header, such that the plurality of different header compression lengths obtained when header-compressing the RTP packet are adapted to lengths and length types required by the system, and then making the PDU-size-adapted compressed header and the RTP payload to respectively form PDCP layer PDUs before mapping them into different RLC entities.

15. (Original) A method according to Claim 13 or 14, further comprising, after separating the compressed header from the RTP payload, further dividing the RTP payload into blocks of different error sensitivities based on RTP payload format information.

16. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 13, further comprising combining the separated compressed header with at least one data blocks of the RTP payload, and PDU-size adapting the data blocks containing said compressed header.

17. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 13, further comprising applying a UEP mechanism to the separated compressed header and the RTP payload, or the data blocks containing the compressed header and the remaining RTP payload data blocks.

18. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 13, further comprising transmitting the separated compressed header and the RTP payload, or the data blocks containing the compressed header and the remaining RTP payload data blocks on the same transmission time interval, and configuring the corresponding transport channels thereof as ~~"~~coordinated dedicated transport channels~~"~~.

19. (Currently Amended) A method according to ~~any one of preceding claims~~ Claim 13, wherein the RLC entity is a TM mode RLC entity.

20. (Currently Amended) A method of receiving real-time IP packets using header compression, wherein a compressed header of the header-compressed packet is separated from an RTP payload thereof at the transmitting end to form different PDCP layer PDUs that are transmitted on different RLC entities, and wherein a single compressed header corresponds to a single RTP payload in each of the header-compressed RTP packets, said method comprising:

receiving and extracting the compressed header and the RTP payload from SDUs of the RLC entities; and

combining the extracted compressed header with the RTP payload.

21. (Currently Amended) A system of transmitting a real-time IP packet using header compression, comprising:

a header compression unit to header-compress ~~for header-compressing~~ RTP packets and mark ~~marking~~ a compressed header and an RTP payload, wherein a single compressed header corresponds to a single RTP payload in each of the header-compressed RTP packets;

a radio link adaptation unit to separate ~~for separating~~ the compressed header from the RTP payload based on said marking, to respectively form PDCP layer PDUs before mapping ~~them~~ the respective PDCP layer PDUs to different RLC entities; and

a transmitter to transmit ~~transmitting unit for transmitting~~ the separated compressed header and RTP payload.

22. (Currently Amended) A system of receiving a real-time IP packet using header compression, wherein a compressed header of the header-compressed packet is separated from an RTP payload thereof at the transmitting end to form different PDCP layer PDUs that are transmitted on different RLC entities, wherein a single compressed header corresponds to a single RTP payload in each of the header-compressed RTP packets, said system comprising:

receiving and extracting unit for to receive and extract ~~receiving and extracting~~ the compressed header and the RTP payload from SDUs of the RLC entities; and

radio link adaptation unit for combining the extracted compressed header with the RTP payload.

23. (Currently Amended) An RTCP packet scheduling method, comprising:

monitoring whether or not the bandwidth requirement of the RTP packet exceeds a predetermined value;

if the bandwidth requirement of the RTP packet exceeds the predetermined value and there is an RTCP packet to be transmitted, buffering the RTCP packet; and

continuously monitoring the bandwidth requirement of the RTP packet, and transmitting the RTCP packet when the bandwidth requirement is lower than the predetermined value.

24. (Original) A method according to Claim 23, wherein the bandwidth requirement being lower than the predetermined value comprises the case where the compression rate of the RTP packet is so high that the bandwidth requirement is lower than the predetermined value.

25. (Original) A method according to Claim 23, wherein the bandwidth requirement being lower than the predetermined value comprises the case where no RTP packet is transmitted.

26. (Original) An RTCP packet scheduling system, comprising:

bandwidth monitoring means for monitoring whether or not the bandwidth requirement of the RTP packet exceeds a predetermined value;

judging means for judging, whether the bandwidth requirement of the RTP packet exceeds the predetermined value and there is an RTCP packet to be transmitted;

buffering means for buffering the RTCP packet, in response to the result of the judging means that the bandwidth requirement of the RTP packet exceeds the predetermined value; and

transmitting means for transmitting the RTCP packet, in response to the result of the judging means that the bandwidth requirement of the RTP packet does not exceed the predetermined value.